R10505709

MECHANICAL DATA SHEET: VESSEL

PLANT ITEM No. 24590-LAW-MV-LCP-VSL-00001

Project:	RPP-WTP	P&ID:	24590-LAW-M6-LCP-P0001
Project No:	24590	Process Data Sheet:	Deleted 1
Project Site:	Hanford	Vessel Drawing	24590-LAW-MV-LCP-P0001
Description:	LAW Concentrate Receipt Vessel 1		

Reference Data

Charge Vessels (Tag Numbers)	Not Applicable
Pulsejet Mixers / Agitators (Tag Numbers)	Not Applicable 1
RFDs/Pumps (Tag Numbers)	Not Applicable 1

Design Data

Quality Level		CM (Note 3)		Fabrication Specs	24590-WTP-3PS-MV00-TP001 (PVDF) 1		
Seismic Category		SC-III		Design Code	ASME VIII Div 1		
Service/Contents		LAW Concentrate Feed		Code Stamp	Yes		
Design Specific Gravity		1.47		NB Registration	Yes		
Maximum Operating Volume	gal	15,435		Weights (lbs)	Empty	Operating	Test
Total Volume	gal	18,130		Estimated	49,200	235,700	199,900
				Actual *			

Inside Diameter	inch	168			Wind Design	Not Required	
Length/Height (TL-TL)	inch	153			Snow Design	Not Required	
		Vessel Operating	Vessel Design	Coil/Jacket Design	Seismic Design	24590-WTP-3PS-MV00-TP002 24590-WTP-3PS-FB01-T0001	
Internal Pressure	psig	0.07	15	None	Seismic Base Moment *	ft*lb	
External Pressure	psig	4.09 1	FV	None	Postweld Heat Treat	Not Required	
Temperature	°F	122	150	None	Corrosion Allowance	Inch	0.04
Min. Design Metal Temp.	°F	40			Hydrostatic Test Pressure *	psig	

Note: Please note that source, special nuclear and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA), are regulated at the U.S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts, that pursuant to the AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

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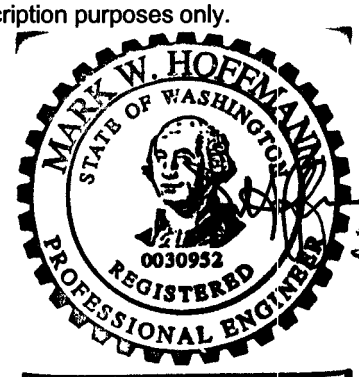

3/7/05

EXPIRES 12/10/06

This bound document contains a total of 3 sheets.

Rev.	Reason for Revision	By	Checked	Review	Approved	Date
1	Issued for Permitting Use					3/7/05
0	Issued for Permitting Use	J. Jackson	S. Lee	C. Slater	E. Stern	12/30/03

BECHTEL	**MECHANICAL DATA SHEET: VESSEL**	**PLANT ITEM No.** ***24590-LAW-MV-LCP-VSL-00001***

Materials of Construction

Component	Material	Minimum Thickness / Size	Containment
Top Head	***SA-240 316 (Note 1)***	***See Drawing***	***Auxiliary***
Shell	***SA-240 316 (Note 1)***	***See Drawing***	***Primary***
Bottom Head	***SA-240 316 (Note 1)***	***See Drawing***	***Primary***
Support	***SA-240 304 (Note 1)***	***See Drawing***	***N/A***
Jacket/Coils/Half-Pipe Jacket	***NA***	***N/A*** 1	***N/A***
Internals	***SA-240 316/SA-312 TP316 (Note 1)***	***See Drawing***	***Thermowells Primary***
Pipe	***SA-312 TP316 Seamless (Note 1)***	***See Drawing***	***Note 2***
Forgings/ Bar stock	***SA-182 F316 (Note 1)***	***See Drawing***	***N/A***
Gaskets (O Ring)	***EPDM*** 1	***N/A***	***N/A***
Bolting	***SA-193 Gr. B8M / SA-194 Gr. 8M*** 1	***N/A***	***N/A***

Miscellaneous Data

Orientation	***Vertical***	Support Type	***Skirt***
Insulation Function	***Not Applicable***	Insulation Material	***Not Applicable***
Insulation Thickness (inch)	***Not Applicable***	Internal Finish	***Welds descaled as laid***
		External Finish	***Welds descaled as laid***

Remarks

**** To be determined by the vendor.***

Note 1: Material shall have Carbon Content of 0.030% Max. Non-welded specialty items are excluded from this requirement.

Note 2: Nozzle necks below normal operating level are Primary, others Auxiliary. See PVDF and vessel drawing for NDE. 1

Note 3: Additional NDE requirements should be as per 6.4 of the PVDF. 1

Note 4: Contents of this document are dangerous waste permit affecting. 1

	MECHANICAL DATA SHEET: VESSEL	PLANT ITEM No. 24590-LAW-MV-LCP-VSL-00001

Equipment Cyclic Data Sheet ⚠1

Component Plant Item Number:	***24590-LAW-MV-LCP-VSL-00001***
Component Description	***Parent Vessel***

The information below is provisional and envelopes operational duty for fatigue assessment. It is not to be used as operational data.

Materials of Construction	***SA-240 316***
Design Life	***40 years***
Component Function and Life Cycle Description	***Equipment Shut Down for maintenance occurs annually.***

Load Type		Min	Max	Number of Cycles	Comment
Design Pressure	psig	***FV***	***15***	***100***	
Operating Pressure	psig	***-4.09***	***0.07***	***100***	***Maximum of 100 startlstop cycles per 40 years of design life***
Operating Temperature	°F	***59***	***122***	***100***	
Contents Specific Gravity		***1.0***	***1.47***	***100***	
Contents Level	inch	***31.00***	***170.00***	***100***	
Localized Features					
Nozzles		***Within 50° F of vessel temperature.***		***As above.***	
Supports		***Same as vessel***		***Number of cycles same as vessel***	

Notes

- ***Cycle increase: The Seller must increase the numbers of operational cycles given above by 10% to account for commissioning duty unless otherwise noted.***